ZooKeys 441: 319–324 (2014)
doi: 10.3897/zookeys.441.7507
www.zookeys.org

CHECKLIST

A peer-reviewed open-access journal
ZooKeys
Launched to accelerate biodiversity research

Checklist of the fly families Chyromyidae and Heleomyzidae (Diptera) of Finland

Jere Kahanpää[1]

1 *Finnish Museum of Natural History, Zoology Unit, P.O. Box 17, FI-00014 University of Helsinki, Finland*

Corresponding author: *Jere Kahanpää* (jere.kahanpaa@helsinki.fi)

Academic editor: *J. Salmel* | Received 13 March 2014 | Accepted 6 May 2014 | Published 19 September 2014

http://zoobank.org/FFD58A2C-97C8-4319-9D2B-AF8ADE1EB9C0

Citation: Kahanpää J (2014) Checklist of the fly families Chyromyidae and Heleomyzidae (Diptera) of Finland. In: Kahanpää J, Salmela J (Eds) Checklist of the Diptera of Finland. ZooKeys 441: 319–324. doi: 10.3897/zookeys.441.7507

Abstract

A Finnish checklist of the sphaeroceroid fly families Chyromyidae and Heleomyzidae is provided.

Keywords

Species list, Finland, Diptera, biodiversity, faunistics

Introduction

The superfamily Sphaeroceroidea is a medium-sized one, with two families of moderate diversity, Sphaeroceridae (1550 species) and Heleomyzidae (~720 species), and the small family Chyromyidae. The enigmatic afrotropical *Mormotomyia hirsuta* Austen, 1936 was once placed near Sphaeroceridae but it is now seen as an ephydroid fly (Kirk-Spriggs et al. 2011). McAlpine (2007) has proposed an alternative concept for Sphaeroceroidea with Sphaeroceridae and Heleomyzidae united as a single family called Heteromyzidae. This proposal has not gained significant support and for the purposes of this checklist the traditional concept of family Sphaeroceridae is retained.

Table 1. Number of species by family.

Family	Number of species in			Level of knowledge
	World (Pape et al. 2011)	**Europe**	**Finland**	
Chyromyidae	138	59	4	poor–average
Heleomyzidae	727	175	61	average

There is no general agreement on the relationships of various heleomyzid tribes. Several different schemes for subfamilies have been proposed (see McAlpine 2007, McAlpine and Woodley 2010). Some taxa treated here as heleomyzids (primarily Trixoscelidinae, Chiropteromyzinae, Heteromyzinae and Borboropsini) may deserve full family status. As a conservative approach this checklist follows Marshall (2012) and keeps them as subfamilies and tribes. The heleomyzid subfamilies and tribes are listed alphabetically.

The Finnish chyromyids are small yellow flies with (at least while alive) iridescent blue or green eyes. Chyromyids are rarely collected and little is known about their ecology or the proper place of the family within Sphaeroceroidea. They may actually be a specialized lineage arising from within Heleomyzidae *sensu lato*.

Two of the three sphaeroceroid families are treated in this paper. The largest, Sphaeroceridae, is covered in a separate paper in this issue of ZooKeys. The Finnish species of Heleomyzidae and Chyromyidae were last listed by Hackman (1980).

Checklist

suborder Brachycera Macquart, 1834
clade Eremoneura Lameere, 1906
clade Cyclorrhapha Brauer, 1863
infraorder Schizophora Becher, 1882
clade Muscaria Enderlein, 1936
parvorder Acalyptratae Macquart, 1835
superfamily Sphaeroceroidea Macquart, 1835

CHYROMYIDAE Hendel, 1916
CHYROMYINAE Hendel, 1916
CHYROMYA Robineau-Desvoidy, 1830
Chyromya flava (Linnaeus, 1758)
Chyromya oppidana (Scopoli, 1763)
GYMNOCHIROMYIA Hendel, 1933
Gymnochiromyia flavella (Zetterstedt, 1848)
= *minima* (Becker, 1904)
Gymnochiromyia inermis (Collin, 1933)

HELEOMYZIDAE Westwood, 1840
BORBOROPSINAE Griffiths, 1972

BORBOROPSIS Czerny, 1902
Borboropsis puberula (Zetterstedt, 1838)
= *fulviceps* (Strobl, 1898)
CHIROPTEROMYZINAE Frey, 1952
CHIROPTEROMYZA Frey, 1952
Chiropteromyza broersei (de Meijere, 1946)
= *wegelii* Frey, 1952
NEOSSOS Malloch, 1927
= ***Ornitholeria*** Frey, 1930
Neossos nidicola (Frey, 1930)
HETEROMYZINAE Fallén, 1820
HETEROMYZA Fallén, 1820
Heteromyza atricornis Meigen, 1830
Heteromyza oculata Fallén, 1820
Heteromyza rotundicornis (Zetterstedt, 1846)
TEPHROCHLAMYS Loew, 1862
Tephrochlamys flavipes (Zetterstedt, 1838)
Tephrochlamys rufiventris (Meigen, 1830)
= *lapponica* (Czerny, 1924)
Tephrochlamys steniusi Frey, 1930
Tephrochlamys tarsalis (Zetterstedt, 1847)
HELEOMYZINAE Westwood, 1840
tribe Heleomyzini Westwood, 1840
GYMNOMUS Loew, 1863
Gymnomus amplicornis (Czerny, 1924)
HELEOMYZA Fallén, 1810
= ***Helomyza*** Fallén, 1820 emend.
= ***Leria*** Robineau-Desvoidy, 1830
sg. *Heleomyza* Fallén, 1810
Heleomyza borealis Boheman, 1865
= *czernyi* Collart, 1933
= *modesta* misid.
Heleomyza hackmani Frey, 1950
Heleomyza pleuralis (Becker, 1907)
Heleomyza serrata (Linnaeus, 1758)
MORPHOLERIA Garrett, 1921
sg. *Spanoparea* Czerny, 1924
Morpholeria dudai (Czerny, 1924)
Morpholeria kerteszii Czerny, 1924
Morpholeria obscuriventris (Zetterstedt, 1847)
Morpholeria ruficornis (Meigen, 1830)
NEOLERIA Malloch, 1919
Neoleria inscripta (Meigen, 1830)

= *minuta* (Zetterstedt, 1838)
Neoleria prominens (Becker, 1897)
= *tibialis* misid.
Neoleria ruficauda (Zetterstedt, 1847)
Neoleria ruficeps (Zetterstedt, 1838)
SCOLIOCENTRA Loew, 1862
sg. *Chaetomus* Czerny, 1924
Scoliocentra confusa (Wahlgren, 1918)
Scoliocentra flavotestacea (Zetterstedt, 1838)
sg. *Leriola* Gorodkov, 1962
Scoliocentra brachypterna (Loew, 1873)
Scoliocentra nigrinervis (Wahlgren, 1918)
sg. *Scoliocentra* Loew, 1862
Scoliocentra dupliciseta (Strobl, 1894)
Scoliocentra scutellaris (Zetterstedt, 1838)
Scoliocentra villosa (Meigen, 1830)
tribe Oecotheini Gorodkov, 1972
ECCOPTOMERA Loew, 1862
Eccoptomera infuscata Wahlgren, 1918
Eccoptomera longiseta (Meigen, 1830)
Eccoptomera marginicornis Czerny, 1924
Eccoptomera microps (Meigen, 1830)
Eccoptomera obscura (Meigen, 1830)
Eccoptomera ornata Loew, 1862
Eccoptomera pallescens (Meigen, 1830)
OECOTHEA Haliday, 1837
Oecothea fenestralis (Fallén, 1820)
tribe Orbelliini Gorodkov, 1972
ORBELLIA Robineau-Desvoidy, 1830
Orbellia nivicola Frey, 1913
SUILLIINAE Wahlgren, 1917
SUILLIA Robineau-Desvoidy, 1830
= ***Allophyla*** Loew, 1862
Suillia affinis (Meigen, 1830)
Suillia apicalis (Loew, 1862)
Suillia atricornis (Meigen, 1830)
Suillia bicolor (Zetterstedt, 1838)
Suillia femoralis (Loew, 1862)
Suillia flava (Meigen, 1830)
Suillia flavifrons (Zetterstedt, 1838)
= *nudipes* (Czerny, 1932)
Suillia fuscicornis (Zetterstedt, 1847)
Suillia humilis (Meigen, 1830)

= *inornata* (Loew, 1862)
Suillia laevifrons (Loew, 1862)
Suillia lineitergum (Pandellé, 1901)
= *stroblii* (Czerny, 1904)
Suillia lurida (Meigen, 1830)
Suillia mikii (Pokorny, 1886)
Suillia nemorum (Meigen, 1830)
Suillia pallida (Fallén, 1820)
Suillia parva (Loew, 1862)
= *collini* Hackman, 1972
= *flavifrons* auct. nec (Zetterstedt, 1838)
Suillia quadrilineata Czerny, 1924
Suillia vaginata (Loew, 1862)
TRIXOSCELIDINAE Hendel, 1916
TRIXOSCELIS Rondani, 1856
Trixoscelis frontalis (Fallén, 1823)
? = *canescens* misid. (see Notes)
Trixoscelis marginella (Fallén, 1823)
Trixoscelis obscurella (Fallén, 1823)
Trixoscelis similis Hackman, 1970

Notes

***Chyromya oppidana* (Scopoli, 1763)**. Found only inside houses and farm buildings in Finland.

***Orbellia nivicola* Frey, 1913**. This species was synonymized with *O. myiopiformis* R.-D. by Storå (1958), but Frey (1958) defended its validity. The status of *O. nivicola* as a species needs verification.

***Trixoscelis canescens* (Loew, 1865)**. This species was originally described on the basis of a single female. Soós (1979) examined the type and revived the name from synonymy with *T. frontalis*. Woźnica (2008) provided an illustrated diagnosis for *T. canescens* and synonymized *T. gigans* Carles-Tolrá, 2001 and *T. fumipennis* Papp, 2005 with it. The species was recently recorded from Finland by Flinck and Kahanpää (2013). Specimens with darkened costal veins and dorsal abdominal surfaces, both proposed diagnostic characters of *T. canescens*, are common among Finnish *T. frontalis* material (see Fig. 8 in Flinck and Kahanpää 2013). Finnish males with these features have genitalia identical with those illustrated for *T. frontalis* by Hackman (1970) and quite unlike the genitalia of *T. gigans* (= *fumipennis* Papp). The male specimen mentioned in Flinck and Kahanpää (2013) was later dissected and it belongs to *T. frontalis*. The external characters (darkened costa and dorsum of abdomen) can not be used to reliably separate *T. canescens* from *T. frontalis*. The Finnish records of *T. canescens* are probably all misidentifications of *T. frontalis*.

References

Flinck J, Kahanpää J (2013) Suomelle uusia kärpäslajeja (Diptera: Brachycera). Sahlbergia 19(1–2): 53–62.

Frey R (1958) Über *Orbellia nivicola* Frey (Dipt., Helomyzidae). Notulae entomologicae 38: 97–100.

Hackman W (1970) Trixoscelidae (Diptera) from Southern Spain and description of a new *Trixoscelis* species from Northern Europe. Entomologica Scandinavica 1(2): 127–134. doi: 10.1163/187631270X00168

Hackman W (1980) A check list of the Finnish Diptera. Notulae entomologicae 60: 17–48, 117–162.

Kirk-Spriggs AH, Kotrba M, Copeland RS (2011) Further details of the morphology of the enigmatic African fly *Mormotomyia hirsuta* Austen (Diptera: Mormotomyiidae). African Invertebrates 52(1): 145–165. doi: 10.5733/afin.052.0107

Marshall SA (2012) Flies: The Natural History and Diversity of Diptera. Firefly Books, Richmond Hill, Ontario, 616 pp.

McAlpine DK (2007) Review of the Borboroidini or Wombat Flies (Diptera: Heteromyzidae), with reconsideration of the status of families Heleomyzidae and Sphaeroceridae, and descriptions of femoral gland-baskets. Records of the Australian Museum 59(3): 143–219. http://australianmuseum.net.au/journal/McAlpine-2007-Rec-Aust-Mus-593-143219, doi: 10.3853/j.0067-1975.59.2007.1487

McAlpine DK, Woodley NE (2010) Heleomyzidae (heleomyzid flies). In: Brown BV, Borkent A, Cumming JM, Wood DM, Woodley NE, Zumbado MA (Eds) Manual of Central American Diptera, Volume 2. NRC Research Press, Ottawa, 1159–1164.

Pape T, Blagoderov V, Mostovski MB (2011) Order Diptera Linnaeus, 1758. In: Zhang Z-Q (Ed) Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness. Zootaxa 3148: 222–229. http://www.mapress.com/zootaxa/2011/f/zt03148p229.pdf

Soós Á (1979) Einige neue acalyptraten Musciden aus der palaearktischen Region (Diptera). Acta zoologica Academiae Scientiarum Hungaricae 25(3–4): 409–414.

Storå R (1958) Über einige Helomyziden-Arten (Diptera) Finnlands. Notulae entomologicae 38(2): 61–63.

Woźnica AJ (2008) 4.3.32 Trixoscelididae. In: Ziegler J (Ed) Diptera Stelviana. A dipterological perspective on a changing alpine landscape. Results from a survey of the biodiversity of Diptera (Insecta) in the Stilfserjoch National Park (Italy). Studia dipterologica Supplement 16: 355–359.